

Abstract of the Disclosure

5 A plasticating screw having a feed section, barrier
melting section, reorientation section and metering section
disposed sequentially downstream wherein solid material is
moved from a trail side of a main flight to a push side of
the main flight in the reorientation section. The
reorientation of solids is accomplished by discontinuing a
barrier flight at a terminal end of said barrier melting
section. The main flight decreases its pitch and continues
10 into the reorientation section, which has a longitudinal
length at least 360° about the screw axis. A melt channel and
solids channel in said barrier melting section merge into a
substantially uniform reorientation channel in the
reorientation section so that solid plastic material conveyed
15 along the reorientation section moves toward the push side of
the main flight. A secondary flight is disposed in the
metering section intermediate the main flight, whereby solids
conveyed along the metering section are positioned primarily
adjacent the push side of the main flight and melt is
20 positioned primarily adjacent the trailing side.